

**WHAT IS CLAIMED IS**

1. A heparin cofactor II-containing preparation substantially free of at least one contaminant selected from a group consisting of a degrading factor, degraded heparin cofactor II, polymerized heparin cofactor II and a coloring substance.

2. A heparin cofactor II-containing preparation substantially free of a degrading factor and degraded heparin cofactor II.

3. The heparin cofactor II-containing preparation of claim 2, which is further substantially free of polymerized heparin cofactor II and/or a coloring substance.

4. A heparin cofactor II-containing preparation comprising heparin cofactor II having a purity of not less than 98%.

5. The heparin cofactor II-containing preparation of any of claims 1 to 4, which is substantially free of an infective virus.

6. A production method of a heparin cofactor II-containing preparation, comprising a step of separating heparin cofactor II and a degrading factor from a solution containing the heparin cofactor II and the degrading factor.

7. The method of claim 6, wherein the step comprises one or more treatment(s) selected from the group consisting of hydrophobic<sup>(interaction)</sup> chromatography, fractionation by a water soluble polymer, salting out and affinity chromatography using a basic amino acid as a ligand.

8. The method of claim 6 or 7, further comprising a step for removing degraded heparin cofactor II and/or a coloring substance.

9. The method of claim 8, wherein the step is gel filtration chromatography.

10. The method of any of claims 6 to 9, further comprising at least one step for virus removal or virus inactivation, which is selected from the group consisting of filtration, a heating treatment and a

surfactant treatment.

11. The method of claim 10, wherein the step is filtration using a porous hollow fiber.

add A1

Add A2